

## REMARKS

This application has been carefully reviewed in light of the Office Action dated July 3, 2007. Claims 1, 2, 11 and 15 to 22 are in the application, with Claim 3, 5 to 8, 10, 12 and 13 having been cancelled, and new Claims 15 to 22 having been added herein. Claims 1, 11, 18 and 22 are independent. Reconsideration and further examination are respectfully requested.

Claims 1 to 3, 5 to 8 and 10 to 13 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,525,888 (Toya) in view of U.S. Patent No. 5,631,677 (Horigome).

Reconsideration and withdrawal of the rejections are respectfully requested.

### Claims 1 and 11

The invention of independent Claims 1 and 11 generally concerns an electric charging apparatus for charging a secondary battery which is held in the apparatus and is attachable to a printer. The printer is driven by electric power from the secondary battery while the electric charging apparatus is attached to the printer. Among other features, Claims 1 and 11 include features of periodically receiving an electric charging control signal from the printer, and controlling to start electric charging of the secondary battery based on the determined electric charging condition, in a case that either (i) the electric charging control signal from the printer indicates permission of electric charging of the secondary battery, or (ii) the electric charging control signal is not received from the printer for a predetermined time period.

Referring specifically to the language of the claims, independent Claim 1 defines an electric charging apparatus for charging a secondary battery which is held in the apparatus and is attachable to a printer, the printer being driven by electric power from the secondary battery while the electric charging apparatus is attached to the printer. The electric charging apparatus comprises a communication unit configured to periodically receive an electric charging control

signal from the printer to which the electric charging apparatus is attached, and determination means for determining an electric charging condition for electrically charging the secondary battery. The electric charging apparatus also comprises control means for controlling to start electric charging of the secondary battery based on the electric charging condition determined by the determination means, in a case that either (i) the electric charging control signal indicates permission of electric charging of the secondary battery, or (ii) the electric charging control signal is not received from the printer for a predetermined time period.

Independent Claim 11 is directed towards an electric charging control method in an electric charging apparatus for charging a secondary battery which is held in the apparatus and is attachable to a printer main body, the printer being driven by electric power from the secondary battery while the electric charging unit is attached to the printer. The method comprises a supply step of supplying the electric power from the secondary battery to the printer to which the electric charging unit is attached, a determination step of determining an electric charging condition for electrically charging the secondary battery, and a reception step of periodically receiving an electric charging control signal for the secondary battery from the printer, in correspondence with a state of the printer. The method also comprises a control step of controlling to start electric charging of the secondary battery based on the electric charging condition determined in the determination step, in a case that the electric charging control signal indicates permission of electric charging of the secondary battery, and in a case that the electric charging control signal is not received from the printer for a predetermined time period.

In entering the rejections of Claims 1 to 3, 5 to 8 and 10 to 13, the Office Action equates Toya's portable telephone 10<sup>1</sup> to the claimed printer. (Office Action, page 2). However, in arguing that Toya discloses that a control signal is received from a printer, the Office Action instead asserts that Toya discloses "control means (Fig. 3, 43; col. 4, 66-67) for controlling electric charging of the secondary battery 20 in correspondence with an electric charging control signal (signals from AC/DC (40) through the charging switch to secondary battery". (Office Action, pages 2 to 3)(emphasis added). Applicant submits that Toya's AC/DC inverter 40 is clearly not the same as Toya's portable telephone 10. Thus, even by the Office Action's own words, Toya does not disclose a control signal received from a printer.<sup>2</sup>

Further, in responding to prior arguments in support of patentability, the Office Action points to Horigome's Figure 4, S101 for the assertion that "Horigome discloses charging control signal is transmitted or received based on a state of the printer or print head of the printer is capped". (Office Action, page 8)(emphasis added). Applicant respectfully disagrees with the Office Action's characterization.

In particular, Figure 4 of Horigome is directed to sensing the capacity of the battery (e.g., S104, S105) in order to, *inter alia*, switch the printer to an off-line state (S111) or power-off the printer (S116). However, Horigome's Figure 4 is not seen to disclose or to suggest

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<sup>1</sup>Specifically, the Office Action asserts a modification of Toya's portable telephone with a printer of Horigome.

<sup>2</sup>In particular, even if Toya's portable telephone 10 could be modified to be a printer based on the disclosure of Horigome (and Applicant does not concede this), the Office Action's characterization that the "control signal" in Toya is received from Toya's AC/DC inverter (and Applicant does not concede this) precludes such a modification from disclosing receiving a control signal from a printer.

transmitting or receiving a charging control signal as asserted by the Office Action. Accordingly, this should be viewed as a traversal of the rejections.

Turning to the current language of the claims, neither Toya nor Horigome are seen to disclose or to suggest at least the features of periodically receiving an electric charging control signal from the printer, and controlling to start electric charging of the secondary battery based on the determined electric charging condition, in a case that either (i) the electric charging control signal from the printer indicates permission of electric charging of the secondary battery, or (ii) the electric charging control signal is not received from the printer for a predetermined time period.

As discussed above, neither Toya nor Horigome, alone or in any permissible combination, are seen to disclose receiving a control signal from a printer. Even more so, Toya and Horigome are not seen to disclose periodically receiving an electric charging control signal from the printer.

In addition, the references are not seen to disclose controlling to start electric charging of the secondary battery based on the determined electric charging condition, in a case that either (i) the electric charging control signal from the printer indicates permission of electric charging of the secondary battery, or (ii) the electric charging control signal is not received from the printer for a predetermined time period.

Accordingly, independent Claims 1 and 11 are believed to be allowable.

#### Claims 18 and 22

Independent Claim 18 defines an electric charging apparatus being attachable to a printer, for charging a secondary battery that is held in the electric charging apparatus, the printer being driven by electric power from the secondary battery while the electric charging apparatus is

attached to the printer, the apparatus comprising determination means for determining whether or not the secondary battery is in an abnormal state, reception means for periodically receiving a signal including data indicating whether or not electric charging of the secondary battery is permitted from the printer, and control means for controlling to start electric charging of the secondary battery in a case that the reception means receives the signal including data indicating that the electric charging of the secondary battery is permitted and the determination means determines that the secondary battery is not in an abnormal state.

Independent Claim 22 is a control method generally corresponding to the apparatus of Claim 18.

The applied references are not seen to disclose or to suggest the features of Claims 18 and 22, and in particular, are not seen to disclose or to suggest at least the features of periodically receiving a signal including data indicating whether or not electric charging of the secondary battery is permitted from the printer, and controlling to start electric charging of the secondary battery in a case that the received signal includes data indicating that the electric charging of the secondary battery is permitted and it is determined that the secondary battery is not in an abnormal state.

As discussed above, Toya and Horigome are not seen to disclose receiving a control signal from a printer. Similarly, Toya and Horigome are not seen to disclose or to suggest periodically receiving a signal including data indicating whether or not electric charging of the secondary battery is permitted from the printer, and controlling to start electric charging of the secondary battery in a case that the received signal includes data indicating that the electric charging of the secondary battery is permitted and the it is determined that the secondary battery is not in an abnormal state.

Accordingly, independent Claims 18 and 22 are believed to be allowable.

The other claims in the application are each dependent from the independent claims and are believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

Turning to a formal matter, the Office Action included a copy of a Form PTO-1449 submitted with the Information Disclosure Statement dated May 3, 2007. However, page 1 of the PTO-1449 was not initialed by the Examiner. Applicant respectfully requests the Examiner return a copy of the initialed page 1 to Applicant with the next correspondence.

No other matters being raised, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

Applicant's undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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